



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,393	01/09/2007	David Patrick Egan	293731US0PCT	2547
22850	7590	05/20/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER MARCHESCHI MICHAEL A				
ART UNIT 1793		PAPER NUMBER		
NOTIFICATION DATE 05/20/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary

Application No.

10/586,393

Applicant(s)

EGAN ET AL.

Examiner

Michael A. Marcheschi

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 8 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 8 and 10 are indefinite because "boronitride coating" lacks antecedent basis because this coating has not been defined in claim 1.

Claims 1-8 and 10 are rejected under 35 U.S.C. 103(a) as obvious EP 532261 in view of ZA 200107995.

The EP reference teaches boron nitride abrasives coated with a first coating layer of a boride, carbide or nitride of a metal (i.e. titanium, etc.) and an outer layer of another boride, nitride or carbide.

The EP reference fails to teach that the outer coating is a carbonitride (i.e. titanium), however, it is well established in the art of coating abrasives (i.e. cBN or diamond) that boride, nitride or carbide coatings are interchangeable with carbonitride coatings (i.e. functional equivalence of these coating for coating superabrasive grains to achieve desired results), as evidenced by the secondary reference, thus the substitution of a carbonitride coating for the carbide, nitrides of boride outer coating of the EP reference would have been well within the scope of the skilled artisan motivated by the fact that the secondary reference clearly teaches the interchangeability of a carbonitride coating for a boride, nitride or carbide coating when coating

superabrasive particles. In other words, the substitution of one known functionally equivalent coating for another that is to be used for the same purpose (coating superabrasives) is well within the scope of the skilled artisan.

Claim 3 is a product by process claim which provide no patentable distinction to the product. Applicants use process limitations to define the product and "product-by-process" claims do not patentably distinguish the product even though made by a different process. *In re Thorpe* 227 USPQ 964.

Claim 9 is rejected under 35 U.S.C. 103(a) as obvious EP 532261 in view of ZA 200107995.

Although the EP reference does not coat diamonds but rather cBN, it is well established in the coating of superabrasive grains that either diamond or cBN grains can be coated with similar coatings, as is evidenced by the secondary reference, thus the substitution of diamond for cBN as the abrasive to be coated with the layers of the EP reference is clearly well within the scope of the skilled artisan (i.e. the secondary reference clearly teaches that diamond or cBN can be coated with the same coatings and one skilled in the art would have clearly appreciated that this concept of coating diamonds, as well as cBN, can be applicable to the disclosure of the EP reference) absent clear and critical evidence to the contrary.

With this in mind, the EP reference fails to teach that the outer coating is a carbonitride (i.e. titanium), however, it is well established in the art of coating abrasives (i.e. cBN or diamond) that boride, nitride or carbide coatings are interchangeable with carbonitride coatings (i.e. functional equivalence of these coating for coating superabrasive grains to achieve desired

results), as evidenced by the secondary reference, thus the substitution of a carbonitride coating for the carbide, nitrides of boride outer coating of the EP reference would have been well within the scope of the skilled artisan motivated by the fact that the secondary reference clearly teaches the interchangeability of a carbonitride coating for a boride, nitride or carbide coating when coating superabrasive particles. In other words, the substitution of one known functionally equivalent coating for another that is to be used for the same purpose (coating superabrasives) is well within the scope of the skilled artisan.

Applicant's arguments with respect to all the claims have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1793

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael A Marcheschi/
Primary Examiner, Art Unit 1793